CENTER FOR SELF-ORGANIZING & INTELLIGENT SYSTEMS

CENTER

The Center for Self-Organizing and Intelligent Systems (CSOIS) was first funded in 1993 to build on its core intelligent systems technology to develop commercializable products to the economic advantage of the state. The Center provides design services to Utah companies to develop intelligent systems solutions for new and improved commercial products. The Center maintains a national and international reputation as a leading contributor to the advancement of intelligent systems research.

TECHNOLOGY

Intelligent systems technology has grown to include virtually any device and/or software concept that attempts to artificially emulate the unique cognizance and control abilities of the human mind. Artificial neural networks are designed to mimic the ability of the brain and central nervous system to learn and generalize from past experience. Fuzzy logic was introduced as a way of emulating the reasoning processes fundamental to human intelligence. Virtual presence controllers attempt to place the remote human operator or controller in a virtual environment identical to that encountered by the controlled process. Neural control emulates the sensory and communication mechanisms of the human neural system.

ACCOMPLISHMENTS

The success of the Center in developing a unique *intelligent mobility* technology has resulted in significant recognition for the Center as a world leader in the design and application of unmanned ground vehicles (UGV's). These remotely controlled vehicles are uniquely suitable for use in agriculture, hazardous environment, and some military applications. During the past year, the Center was awarded a major Department of Defense UGV contract with enormous economic implications for the state. Consequently CSOIS was granted an unusual sixth year of funding support by the Centers of Excellence program to enable it to take advantage of this outstanding opportunity. A new spin-off company, **Visionary Products, Inc**., was created to pursue commercialization of the remotely controlled land-roving vehicle named Red Rover. A space hardened version of the rover will be a part of the next NASA Mars probe and will be available for children to remotely control on the surface of the planet Mars.

CONTACT

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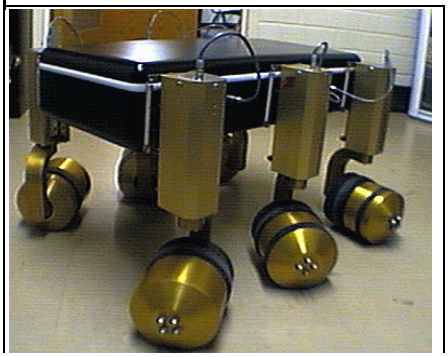
Can You Imagine...

. . . driving a remote mechanical rover across a Martian landscape, maneuvering around obstacles, retrieving soil samples, and pointing the rover camera in all directions to view the surrounding landscape, all from your personal computer.

THE CENTER INVESTIGATES ELECTRONIC AND SOFTWARE SYSTEMS THAT EMULATE THE LEARNING AND REASONING CAPABILITIES OF THE HUMAN MIND AND APPLIES THEM TO COMMERCIAL PRODUCTS.



- The newest rover, T1, which is the successor to the ARCIII